



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/557,164

04/25/2000

William J. Dally

2789.2004-001

9280

21005

7590

08/03/2004

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.  
530 VIRGINIA ROAD  
P.O. BOX 9133  
CONCORD, MA 01742-9133

EXAMINER

BAYARD, EMMANUEL

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 08/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/557,164

Applicant(s)

DALLY ET AL.

Examiner

Emmanuel Bayard

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 5/26/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This is in response to requests for reconsideration filed on 5/26/04 in which claims 1-66 are pending. The requests have been considered but they are moot based on the new ground of rejection.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371<sup>o</sup> of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-4, 7-8, 11, 18-20, 23, 24, 33-36, 39-40, 43, 50-52, 55-56, 65-66 are rejected under 35 U.S.C. 102(e) as being anticipated by Takada et al U.S. Patent No 6,246,271  
B1

As per claims 1, 33 and 65 Takada et al teaches a data transmitter comprising: a data input (see fig. 6 element 602); plural delay elements applying different delays to the data input in

parallel to provide plural delayed data signals (see figs. 2, 7 elements 11, 13 and col.2, lines 1- 65 and col.3, lines 42-67 and col.6, lines 46-67); an adder is the same as the claimed (data output combining) the delayed data signals (see figs. 2, 7 element 14 and col.2, lines 13-17, 48-50 and col.3, lines 55-56), a control signal is the same as the claimed (transition time) (see figs. 2, 7 and col.3, line 53 and col.4, line 26) of the data output being determined by difference in delays applied to the data input.

As per claims 2, 34 the data transmitter of Takada et al does include parallel delay connection (see figs. 2, 7).

As per claims 3, 35 the data transmitter of Takada et al teaches a frequency multiplier for use in a clock generator (see col.1, lines 15-17). Therefore a clock signal applied the delay elements and different delays and applied to the data input is inherently included in Takada.

As per claims 4, 8, 20, 24, 36, 40, 52 and 56, the data transmitter of Takada et al includes a plural driver circuits (see col4, lines 63-67).

As per claims 7, 39 the data transmitter of Takada et al includes parallel data input (see figs. 2, 7).

As per claims 11, 43, the data transmitter of Takada et al inherently includes data output is proportional to bit time.

As per claims 18, 50 and 66, Takada et al teaches a data transmitter comprising: a data input (see figs. 2, 7 element Fin1); Takada a frequency multiplier for use in a clock generator (see col.1, lines 15-17) therefore a bit clock is inherently included in Takada; a control signal is the same as the claimed (transition time control) (see figs. 2, 7 and col.3, line 53 and col.4, line 26) for receiving the data input and providing a controlled data signal, the transition time control

controlling the transition time of the controlled signal to be proportional to bit time of the bit clock (see col.1, lines 15-17) . When the delay stage is enable a clock signal will pass therefore generating a time period which is considered as the claimed (the transition time control controlling the transition time of the controlled signal to be proportional to bit time of the bit clock).

As per claims 19 and 51, the data transmitter of Takada et al teaches a frequency multiplier for use in a clock generator (see col.1, lines 15-17). Therefore a clock signal applied the delay elements and different delays and applied to the data input is inherently included in Takada.

As per claims 23 and 55 the data transmitter of Takada et al does include parallel data input (see figs. 2, 7).

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5-6, 9-10, 12-17, 21-22, 25-32, 37-38, 41-42, 44-49, 53-54, 57-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over of Takada et al U.S. Patent No 6,246,271 B1 in view of Bae U.S. Patent No 6,242,960 B1.

As per claims 5, 9, 21, 25, 37, 41, 53 and 57 Harvey et al disclose all the features of the claimed invention except each delay having CMOS invertors.

Bae teaches delay having CMOS invertors (see fig.1 elements 146-158 and col.3, lines 17-18, 45-48).

It would have been obvious to one skill in the art to incorporate the CMOS invertors of Bae into of Takada et al as to invert the phase of the reference clock signal as taught by Bae (see col.3, lines 36-37).

As per claims 6, 10, 22, 26, 38, 42, 54 and 58, the transmitter of Bae does include a loading device, which is functionally equivalent to the claimed (load capacitance) (see col.4, lines 47-60). Furthermore implementing such loading into of Takada et al would have been obvious to one of ordinary skill in the art as to control the provided power supply into the transistors.

As per claims 13, 16, 28, 31, 45, 48, 60, 63 of Takada et al discloses a circuit to control power supply voltage to the delay elements, the circuit comprising: a first and second delay elements, each receiving a common clock signal and a phase comparator (see fig.1 element 103) which compares the outputs of the first and second delay elements and control a supply voltage applied to the first and second delay elements to control phase difference of the outputs (see col.4, lines 13-67 and col.7, lines 13-20).

As per claims 12, 15, 27, 30, 44, 47, 59, 62, the circuit of Takada et al does include a supply voltage (see fig.3 elements Vdd and col.4, lines 17-67) to control the delay elements.

As per claims 14, 17, 29, 32, 46, 49, 61 and 64, the transmitter of Takada et al does include a first and second delay elements having a sequence of n elements and a clock signal frequency (see figs. 2, 7).

*Conclusion*

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Inoue et al U.S. Patent No 6,650,692 B2 teaches a CDMA receiver.

Saeki RE37,232 E teaches a delay circuit device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is (703) 308-9573. The examiner can normally be reached on Monday-Thursday from 8:00 AM - 5:30 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour, can be reached on (703) 306-3034. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.

Emmanuel Bayard

Primary Examiner

7/30/04

EMMANUEL BAYARD  
PRIMARY EXAMINER

